

A BEHAVIORAL ANALYSIS OF RETURN POLICIES: FLEXIBILITY AND
QUALITY SIGNALING IN REMOTE PURCHASES

By

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This dissertation is dedicated to the memory of my grandfather, Wayne L. Wood, and my great-aunt, Stephanie Syplychak. The apple did not fall far from these two beloved trees.

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Given the growth of catalog sales and the enormous potential for electronic commerce, it is important to understand consumer-vendor interaction in the context of remote purchase. For consumers, remote purchase implies that information typically available in a store may not be available at the time of purchase and, therefore, choices may be made with less confidence. For vendors, such consumer uncertainty increases the likelihood of product returns. Given the uncertainty associated with evaluation of a remote good, consumer propensity to purchase should be influenced, in prospect, by the vendor's return policy. Consumers obviously favor lenient return policies; vendors fear the cost of leniency. However, initial research from this dissertation suggests that vendor fears may be misplaced for a reason unique to remote purchase. Specifically, the decision to order and the decision to retain are separated by a time interval. Thus, a lenient return policy allows the consumer to frame the initial decision more as a trial than

a purchase, thereby delaying decision conflict and commitment until the product is received. In addition, lenient policies may be interpreted as signals of product quality, similar to generous warranties. These signals may persist and influence product perception even after receipt of the good. Results suggest that consumers perceive greater flexibility under lenient than under restrictive policies. Moreover, consumers appropriately consider the point of decision to be at the time of receipt in the lenient case, but at the time of ordering in the restrictive case. However, lenient-policy consumers fail to increase deliberation for the keep-return decision. Thus, lenient policies can prompt action at the time of the initial decision (via reduction in risk and increased perceptions of quality) without causing excessive deliberation (and therefore increased return rates) upon receipt. Lenient policies enhanced perceived quality and also resulted in a lower likelihood of additional search during the order-receipt time interval. Importantly, perceptions of quality persisted after product receipt and inspection. However, the effect of return policy leniency on quality evaluations is moderated by the ambiguity of product attributes.

CHAPTER 1 INTRODUCTION

The emerging literature on retail format choice (Messinger and Narasimhan 1997; Alba et al. 1997) has been fueled in part by interest in Internet-based shopping and other forms of home shopping such as catalogs, CD ROM, and TV home shopping. All forms of home shopping lack touch-and-feel information. Some analysts have speculated that, if the information at the time of choice is inadequate, consumers may be dissatisfied when the ordered merchandise arrives, leading to high levels of return. This paper investigates the effects of return policy on “remote” purchases via catalogs. One key aspect of remote purchase is that the purchase decision has two stages separated by a waiting period. Choice takes place at time 1, based on written and pictorial information but without the benefit of direct inspection of the physical merchandise. At time 2, the ordered merchandise is delivered to the consumer, who then must decide whether to keep or return it. The research reported in this dissertation focuses on the effects of lenient versus restrictive return policies on decision making at these two stages.

Emerging Channels of Remote Purchase

The potential of interactive marketing is a topical issue in both the popular press and academia. Communicating with consumers in their home via the television or computer creates new opportunities for profit and research.

“This is the dream of electronic commerce. The Internet has already connected 50m-60m of the world’s people through a seamless digital network. Where they live and what time zone they are in makes no

difference. Place a store on the Internet anywhere and it is, in effect, everywhere." (*The Economist*, 1997, p. 3)

Although Internet marketplaces have made halting progress, it is still unclear how consumers will use this new medium. Two problems that are often mentioned by consumers are the uncertainty involved in choosing among alternatives that can not be physically examined and the difficulties encountered in shipping merchandise. In traditional brick-and-mortar stores, consumers directly inspect merchandise and receive chosen goods immediately. Remote purchase lacks both attributes. As *The Economist* (1997, p.3) notes, "The Internet, for all the miracles it has wrought in communications, is still a horrible way to buy a shirt." Yet, facing similar hurdles, catalogs sell tens of thousands of shirt each year. What can catalogers teach the next generation of remote sellers?

The Catalog Industry as a Precursor

Remote sales channels, far from being a thing of the future, have their roots in an era when many Americans lived far from the nearest retailer. In the late 1800s, farmsteads spread across the Great Plains and catalogs from Montgomery Ward and Sears Roebuck were a way of life. Although a plethora of shopping venues surround even the most isolated shopper today, catalogs offer a convenient way to order products without leaving the house.

"When you shop from a catalog, you're not hemmed in by time or space. A night owl can buy a feather boa at 3 a.m.; a city mouse can buy cheddar made in the Vermont countryside. Catalog shoppers can peruse several malls' worth of items and buy from an armchair, without driving, bumping elbows with other shoppers, or waiting in line. There's no question that American consumers find those benefits appealing." (*Consumer Reports*, 1994, p. 621).

The proof that catalogs appeal to many shoppers can be found in the impressive sales figures and growth rates of catalogs in the past few years. Mail-order sales have grown steadily at an annual rate of 9.9% since 1990 (Niemira 1996). Catalog sales were estimated to reach \$74 billion for 1996 and are predicted to be \$103 billion by the year 2001 (Ray and Reis 1996). The National Retail Federation predicted a 12% growth rate for non-store (catalog) sales at their 1997 Expo (*Discount Store News* 1997).

Perhaps the experience (and success) of catalogs can be harnessed to benefit more futuristic interactive marketing. The basics of remote purchase remain the same. Consumer behavior in catalog purchase scenarios may be the best predictor of how consumers will adopt, and adapt to, interactive marketing.

The Problem of Product Returns

Return policies are a source of managerial angst among catalogers and many traditional retailers as well. Consumers obviously value return policies that are lenient in terms of how long products may be returned after purchase, whether returns are questioned or not, whether cash or store credit is given, and whether sale items can be returned. However, lenient policies are both costly to operate and open to consumer abuse. Popular managerial theory also holds that if a product is easy to return, it is more likely to be returned. The fact that many retailers are confused and beleaguered over return policies is reflected in some recent retailer actions. Wal-Mart has changed its formerly unrestrictive policies (Ratliff 1994) and Talbot's has formed a return policy task force (Cummings 1995, personal communication). Target has reported that it has increased the amount of in-store signage devoted to explaining their return policy (Greenberg 1994). When remote purchases are considered, return policy becomes an

even more important topic. Returns for vendors such as the Home Shopping Network and QVC are higher than their brick-and-mortar store equivalents, perhaps due to the lack of certainty consumers experience when ordering a product without physical inspection.

The catalog industry shows a surprisingly wide variance in return policies. Some catalogs do not allow the return of particular items. Some catalogs not only accept returns unconditionally but also pay for return shipping costs. From the consumer's point of view, a lenient return policy reduces the risk of buying a product that has not been seen or touched. From the retailer's point of view, lenient return policies make consumers more prone to return ordered products. In contrast, the present research suggests that there may be some unexpected benefits of lenient return policies to the retailer.

Although some previous research has examined retailer return policy (Hess, Chu, and Gerstner 1996; Hess and Mayhew 1997; Moorthy and Srinivasan 1995; Padmanabhan and Png 1997), it has focused exclusively on quantitative modeling and takes a normative perspective. Hess et al. (1996) showed that retailers are motivated to impose nonrefundable return charges, based on a percentage of the merchandise value, in order to prevent "inappropriate" returns by the consumer. Hess and Mayhew (1997) explored a method by which retailers could control returns by identifying either customers or products with high return probabilities. Padmanabhan and Png (1997) investigated how the use of return policies can differentially affect manufacturers' and retailers' profits in markets with certain or uncertain demand. The present research attempts to supplement these studies by providing insights about actual consumer behavior. It does so by examining the joint effects of return policy, remoteness of purchase, and time on consumer perceptions of product quality.

Summary

Retailers and researchers alike are interested in how consumers will react to the emerging forms of remote purchase such as interactive marketing. To this end, it is suggested that currently successful remote venues, such as catalogs, should be studied. Consumers state that a major concern about remote purchases is the uncertainty created by the lack of tangible pre-purchase examination and by the delay of shipping. These concerns impact return rates and are impacted by return policies. Product returns are a potential source of disaster for catalogers who must deal with higher than usual return rates and the added expense of shipping and handling. This research investigates the influence of different return policies on consumer behavior in remote versus traditional brick-and-mortar retail environments.

The next chapter discusses the differences between remote purchases and brick-and-mortar store purchases and the consequences of these differences as suggested by consumer behavior research. Chapter 3 describes three pilot studies that support basic assumptions of the present research. Chapter 4 describes the main experiment of the dissertation and focuses on the importance of delay and product attribute ambiguity on return policy effects. The final chapter summarizes the research findings and discusses theoretical and managerial implications.

CHAPTER 2
INFLUENCE OF RETURN POLICY ON CONSUMER PURCHASE DECISION

Differences between Remote Sales and Traditional Sales

There are a few key characteristics that differentiate remote purchases from more traditional brick-and-mortar store purchases. First, in remote purchases, the decision may be viewed as two separate decisions: the decision to order and, upon receipt, the decision to keep or return the item. Second, these two decisions are separated by a period of time. Third, the consumer does not have the opportunity to physically examine the product until the second-stage decision. These characteristics are represented in Figure 1.

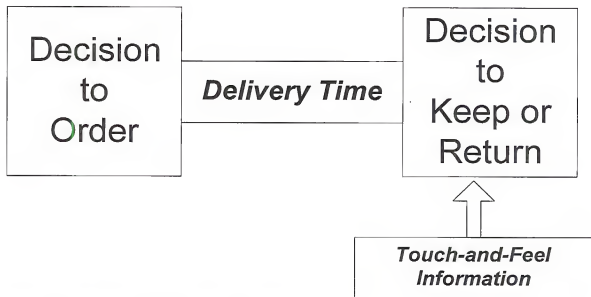


Figure 1: Diagram of a Remote Purchase

In a brick-and-mortar store situation, the consumer can typically handle or examine the good prior to making the purchase decision. The purchase decision is regarded as a single choice and the consumer takes possession of the chosen good immediately. Consumers can return items; however, because brick-and-mortar stores offer more pre-purchase information or experience than do catalogs, consumers may be less likely to purchase with the possibility of return in mind. The characteristics of remote sales describe both interactive and catalog sales and can lead to interesting deviations from in-store customer actions. Two separate but equally relevant theoretical approaches are used to suggest patterns of behavior unique to remote sales. The literature on decision conflict is used to shed light on purchase decision deliberation; the literature on quality signaling helps explain how consumers evaluate products before and after receipt. I now turn to a discussion of these two domains.

Effects of Decision Conflict and Deliberation

The availability of choice among options inherently involves some level of decision conflict. This conflict is exacerbated by the ability and cost of reversing a decision and anticipation of regret (Tversky and Shafir 1992). Conversely, a lenient return policy that permits the return of unsatisfactory products allows consumers to make a decision to order a product while maintaining flexibility. If consumers are faced with alternatives from two different catalogs, they will be motivated to choose the catalog with the most lenient return policy. This is analogous to research by Kahn, Moore, and Glazer (1983) showing that consumers value flexibility and choose alternatives that allow delay of irreversible decisions. However, when a consumer is considering one alternative in a given catalog, the decision to order produces more conflict if the catalog has a strict

return policy. This suggests that the consumer may take more time to deliberate the order (Janis and Mann 1970; Mann 1971), may delay the decision (Tversky and Shafir 1992) or may avoid the decision altogether if heightened conflict leads to negative emotion (Luce et al. 1997). If a retailer's strict return policy heightens conflict and uncertainty about a purchase made without touch-and-feel information, I hypothesize that consumers will be less likely to order products. Greater leniency may increase order rates, but this is only optimal if return rates don't increase as well.

The leniency of the return policy may influence consumers' perceptions of ownership. Return behavior is assumed to follow Kahneman and Tversky's (1979) value function that is defined in terms of perceived gains and losses relative to a central reference point. Because value is defined relative to a reference point, a shift in the reference point may redefine gains and losses. Moreover, the position of the reference point is malleable and may be easily altered by a change in the way the problem is framed (Tversky and Kahneman 1981). For example, Tversky and Kahneman demonstrate how choice of formally equivalent options can be manipulated by altering the phrasing of the option to emphasize either loss or gain. Other researchers have found similar results (Levin and Gaeth 1988; Herr 1989; Simonson 1989; see also Thaler 1981). If a return policy is very lenient (or has few costs), consumers may consider ordering as a means of trial to gather information (Robertson 1976; Smith and Swinyard 1982). That is, a lenient policy may cause consumers to frame the order as a trial.

However, as previously noted, remote purchases involve two decisions: the decision to order and the decision to keep or return. In these situations, the purchase decision is divided and the question arises as to when the consumer really *owns* the

product; is it owned when first ordered or only after receipt? If consumers, under lenient return policies, view purchase as a “trial,” the second-stage decision to keep or return becomes the more important or conflictual decision. Thus, deliberation at the decision to keep or return should be high. For costly return policies the opposite is expected. Deliberation should be high at the decision to order because consumers are framing the order as a purchase and low at the decision to keep or return because the decision essentially has already been made. This pattern of results would suggest that the original framing of the order, either as a trial or as a purchase, persists until the Time 2 decision (Figure 2A).

However, I propose a different pattern of results. I hypothesize that lenient return policies reduce the total amount of decision conflict or deliberation because trial-framing consumers fail to increase deliberation at the second-stage keep-return decision. This may occur because of the delivery period that separates the two purchase decisions. Consumers who order a product in a trial frame of mind may become increasingly committed during the time spent awaiting the product. We term this “creeping commitment,” as consumers may not be aware of its occurrence. Janis and Mann (1970) discuss commitment as incremental:

“Psychologists often talk about commitment as though it were always a standard admission price that everyone knowingly pays each time he starts to carry out a new decision. But commitment often comes about involuntarily and in a piecemeal fashion, eventually trapping the nonvigilant decision maker into a binding decision against his own better judgment.”

Several factors may lead to creeping commitment. The endowment effect (Kahneman, Knetsch, and Thaler 1990), in which consumers feel an increase in value for products they own, may occur. In a well-known example, subjects given a mug set a

higher selling price for that mug than subjects who were asked to give a price for which they would buy the mug. In a remote purchase scenario, consumers who ordered the product under a restricted return policy may treat the decision to keep or return more like an opportunity to sell back the product. Consumers who ordered the product under a lenient policy may treat the keep or return decision more like an opportunity to buy the product. This suggests that the lenient-policy consumer would be more likely to return the product than the restricted-policy consumer. However, if the endowment effect influences both strict and lenient return policy consumers, no differences in return tendencies should exist.

The act of ordering a product also may trigger a purchase schema so that the sheer act of giving one's credit card number may cause a product's price to be regarded as a sunk investment (Arkes and Blumer 1985; Staw 1976). Thus, consumers who cavalierly order a product because they frame it as a trial may fail to increase deliberation as intended at the decision to keep or return the product; in their mind it has already been purchased and is now "owned." This pattern of results can be seen in Figure 2B. This pattern suggests that although lenient return policies reduced decision conflict in the Time 1 decision to order, it does not cause a corresponding increase in decision conflict at Time 2. Thus, lenient return policies may reduce overall conflict in remote purchase decisions. Less conflictual decisions benefit consumers and catalogers. If the decision to keep or return is equally conflictual for both lenient and restricted return policy consumers, there is no reason why return rates should be higher with lenient policies. However, the cataloger's fear still remains that the added flexibility created by lenient return policies may cause consumers to continue their product search after

ordering products or to be more likely to return products after receipt. To study this possibility, I must turn to a discussion of return policies as quality signals.

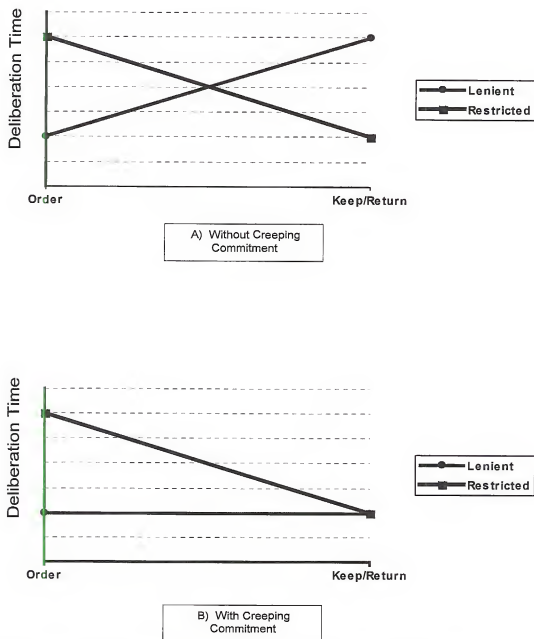


Figure 2 Decision Deliberation Time with and without Increased Commitment

Effects of Quality Signaling

There is much research to support the idea that businesses often send, purposely or inadvertently, signals about their quality to the consumer (Heil and Robertson 1991; Nelson 1974; Riley 1975; Kihlstrom and Riordan 1984; Engers 1987; Boulding 1989; Simester 1995). Money-back guarantees have been found to be effective as quality signals in retail (Moorthy and Srinivasan 1995). Such guarantees are seen as diagnostic because transactions costs involved in product returns keep low quality retailers from cheating. However, this view is based on the assumption that product quality can be tested absolutely at Time 2.

In catalog situations, consumers do not have the opportunity for direct experience with products that they buy; thus, such quality signals may become more salient. Buying a product from a remote location requires consumers to generate and test hypotheses about quality. Consumers may feel that better return policies are indicative of high quality because the catalog is "standing behind its products." Consumers may have a naive understanding that return policies are expensive to maintain and may reason that a retailer would not offer a lenient return policy if a high percentage of products are actually returned. Previous research has generally treated quality signals as valid. This assumes that low quality is clearly apparent to the consumer upon evaluation. However, this mechanism may not work as a true signal because ambiguous product attributes may make testing the signal difficult and open to bias. Inferences are important because remote purchase of products with predominantly ambiguous attributes (e.g. clothing, food) is more uncertain than purchase of products that consist of unambiguous search attributes (e.g. computer hardware). In fact, because remote purchases lack tactile

experience, consumers make the decision to order based on impoverished information and should rely more heavily on quality inferences.

Once the consumer has generated a hypothesis about what sort of product quality they expect,¹ the next task is to test that hypothesis when the product arrives. One might anticipate that errors of inference would be erased once a physical product later arrives. However, many of the attributes unavailable to the consumer while making the ordering decision are the same sort of experiential or ambiguous attributes that are difficult to test even with tactile experience. These ambiguous attributes often fall prey to confirmation bias, a phenomenon by which consumers tend to interpret evidence in a manner that

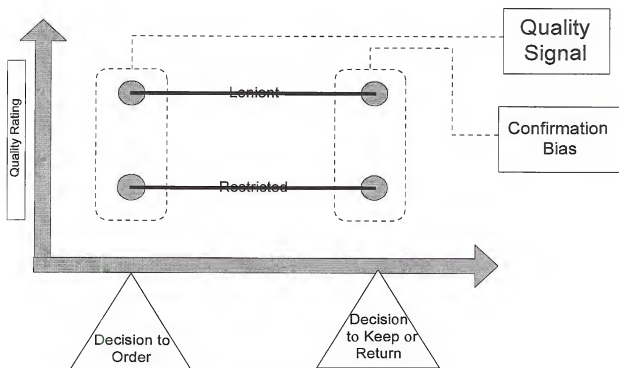


Figure 3: Increase in Evaluation at Both Decision Points

¹ I assume that, while the expectation of quality must pass some threshold if the consumer does indeed order the product, the measure of quality is not discreet.

confirms their expectations (Deighton 1984; Hoch and Ha 1986; Hoch and Deighton 1989). Thus, quality signals may persist after receipt, especially when key attributes are ambiguous. This is presented in Figure 3.

Summary

Prior research suggests several ways that remote purchase behavior may differ from conventional brick-and-mortar purchase behavior. It is hypothesized that these differences are driven by characteristics unique to remote purchase, such as the two-stage purchase decision, the delay between choice and receipt, and the inopportunity for direct pre-choice examination. Formal hypotheses are described in subsequent chapters, however a brief summary of expected effects is shown here to clarify predictions derived from the literature review (Figure 4).

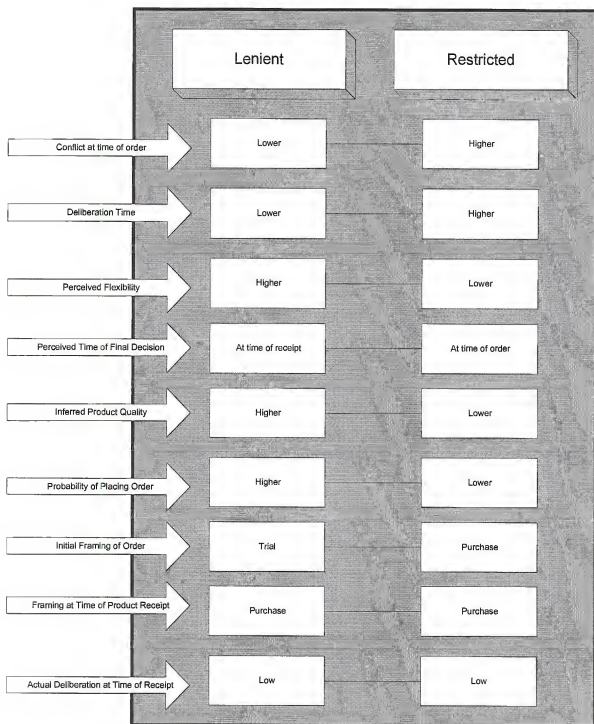


Figure 4: Summary of Proposed Effects of Return Policy Leniency

CHAPTER 3 PILOT STUDIES AND RESULTS

A number of preliminary studies were completed to motivate the main experiment. These studies sought support for basic assumptions and hypotheses concerning return policies. Questions of initial importance included:

- Does return policy influence choice?
- Does return policy influence catalog order rates?
- Does return policy influence commitment to the order?
- Does return policy influence decision conflict?
- Does return policy influence product evaluations?

These questions focus on the existence of return policy effects. The three pilot studies described in this chapter demonstrate the influence of return policy leniency. The main experiment, discussed in Chapter 4, tackles the subsequent question of *why* return policies influence behavior.

The first, and most basic, assumption is that return policies influence choice. A lenient return policy should increase preference for catalog products, *ceteris paribus*. Thus, return policy leniency should be a positively valued choice attribute. Furthermore, it is hypothesized that its influence goes beyond the overt value of being able to return unsatisfactory goods. A lenient policy also may serve as a signal of product quality. If lenience increases the attractiveness of a product, it should also increase the likelihood of order. However, greater lenience may lessen consumer commitment to the ordered good as measured by continued product search after the product has been ordered but before it arrives. Knowing that return will be easy or inexpensive, consumers may order products

as a form of product search or trial. Prior research has shown that consumers use trial as a means of gathering information (Robertson 1976; Smith and Swinyard 1982). If consumers frame orders as “trials,” they may not feel the commitment of purchase or ownership. However, if return policies do act as signals of quality, then one would expect an opposite effect on the likelihood of continued search. The more confident the consumer is about the satisfactory quality of the ordered product, the less likely he or she should be to continue product search. These predictions are formalized in the following hypotheses:

H1a: Return policy attributes will have a significant effect on choice probability.

H1b: Return policy attributes will have a significant effect on choice probability even when they do not add overt value to the choice at hand.

H1c: Greater return policy leniency will result in a greater likelihood of product order.

H1d: Greater return policy leniency will be negatively related to subsequent product search.

Furthermore, it is expected that quality ratings of products will be higher for catalogs with lenient return policies than for those with restricted return policies, *ceteris paribus*. If the quality ratings are higher at the time of ordering, this suggests quality signaling. If the quality ratings remain higher at the time of receipt, this suggests confirmation bias. It is also hypothesized that a lenient return policy will decrease the time consumers spend deliberating an order, without subsequently increasing the time spent deliberating the keep-return decision. Thus, a lenient return policy will decrease the overall decision conflict in remote purchases.

H1e: Lenient return policies will lead to higher product evaluations, both before and after physical examination, than restricted return policies.

H1f: Lenient return policies will lead to less deliberation time than restricted return policies during the decision. However, deliberation time for the decision to keep or return will not be influenced by return policy leniency.

Pilot Study 1: Conjoint Analysis of a Remote Purchase Choice

The first assumption is that return policy can influence consumer choice (H1a and H1b). To test this assumption, I designed a simple conjoint exercise in which subjects were asked to rank radar detectors from various unnamed catalogs described by functional features of the product and return policy characteristics of the vendor.

Method

Subjects were 77 undergraduates at a large Southeast university who were awarded class credit for participation. Subjects read about a choice set of eight automobile radar detectors selected from anonymous catalogs. The choices differed on five attributes, each of which had two levels. The availability of a Variable Signal option and City/Highway option were the two feature attributes. The first of two return policy attributes was the time limitation for returns; returns would be accepted for either 45 days or 30 days after purchase. The second return policy attribute concerned discounted sale items; sale items were either returnable or not returnable. This attribute was irrelevant to the subjects' choice decision inasmuch as none of the eight radar detectors were on sale. The exercise instructions clearly stated in boldface font that none of the products shown were on sale. This attribute was of particular interest as it provided no practical benefit to the consumer; in principle, it should not influence choice. The fifth attribute was price, listed as either \$174.99 or \$179.99. Subjects considered the eight different radar

detectors and ranked them from best to worst. Ties in ranking were allowed. The exercise, as it was presented to subjects, is reproduced in Appendix A.

Results and Discussion

Ranking data were translated into part-worths for each subject and then used to compute individual utility measures for each attribute. Individual utility measures cannot be aggregated as can choice probabilities; accordingly, these utility measures were used to create choice probabilities for the eight options following Luce's rule for normalization (Urban and Hauser 1993). Results suggest that return policy attributes can influence the consideration of catalog products. Even when the return policy attribute did not pertain to the choice at hand, it influenced choice. Specifically, there was a significant effect of the ability to return sale items on choice. Average choice probability for returnable sale items was 14.8%, whereas it was only 10.2% for options without ($p < .001$). A significant effect of the time limit of return policies was also demonstrated. The average choice probability for options with a 45-day limit was 15.2% whereas the average choice probability was only 10.9% for options with a 30-day returns limit ($p < .001$). H1a and H1b are supported

It could be argued that it is not surprising that subjects used the returnability attribute even though it did not apply to the choice at hand; since, when assessing products that have only five specified attributes, subjects might use all five attributes for lack of other diagnostic information. This argument can be countered by examining the average part-worths for each attribute. Average part-worths for the functional features, Variable Signal option ($m = 1.15$) and City/Highway option ($m = 1.32$), were the most influential attributes. The return of sales items attribute had the second largest effect ($m =$

0.77). The effect of having 45 rather than 30 days in which to return the product was much smaller ($m = .485$). Apparently, subjects did not perceive a large difference between 30 days and 45 days. Lastly, a \$5 difference in price had the smallest effect ($m = 0.27$). This suggests that while functional features were the most important, as might be expected, return policy attributes showed considerable influence.

Pilot Study 2: Order Rates and Commitment to the Order

The second pilot study explored, via paper-and-pencil consumer scenarios, the influence of return policies on order rates and order commitment (H1c and H1d). Subjects were presented with scenarios and asked to predict their behavior. Two versions of the scenario were designed to explore order rates and order commitment. In Version 1, subjects rated the probability that they would order a given item. In Version 2, subjects rated the probability that they would continue product search after an item had been ordered.

Version 1: Method

Subjects were 46 undergraduates at a large Southeast university who received class credit for participation. They were asked to imagine that they were looking for a collegiate tee shirt for an upcoming sports event, but was having trouble finding anything suitable in the stores around campus. The consumer then discovered a university catalog, and in it found an attractive shirt. The return policy of the catalog was described as either

more lenient than other typical policies or as more restrictive². The subject then rated the probability that he or she would order the t-shirt in the catalog. The exact format can be seen in Appendix B.

Version 1: Results and Discussion

The study tested the influence of return policy leniency on consumers' probability of ordering. The order probability for the Lenient Return condition ($m = 60.7\%$) was significantly greater than the Restricted Return condition ($m = 46.7\%$), $F(1,45) = 8.84$, $p < .01$. $H1c$ is supported.

Version 2: Method

Subjects were 22 undergraduates at a large Southeast university who received class credit for participation. In the second version of the scenario, subjects were provided the same scenario as in Version 1, but instead imagined that they had already ordered the tee shirt from the catalog. Before the ordered shirt arrived, a good collegiate-wear store 15 miles from campus was recommended by a friend. Subjects were then asked to give the probability that they would go to the store to look at shirts before the previously ordered shirt arrived.

Version 2: Results and Discussion

The second version of the scenario tested the influence of return policy on consumers' probability of continuing search subsequent to ordering a product. The probability of continued search was significantly greater for the Restricted condition ($m =$

² In Pilot Studies 1 and 3, the stimuli did not make any assessment of the catalog return policy compared to other catalogs' return policies. Subjects were required to make a judgment of comparative leniency. To make sure that subjects were not viewing both

68.0%) than for the Lenient Return condition ($m = 39.3\%$; $F(1,21) = 176.86$, $p < .001$).

H1d is supported. This finding is consistent with the contention that a lenient return policy increases expectations of quality and, therefore, expected satisfaction. Consumers who ordered under a lenient return policy may frame their initial order as a trial; however they seem to be more committed to the order than those who ordered under a strict return policy. The results of both versions are provided in Figure 5. Taken together, lenient return policies prompt purchase and inhibit search for competing alternatives.

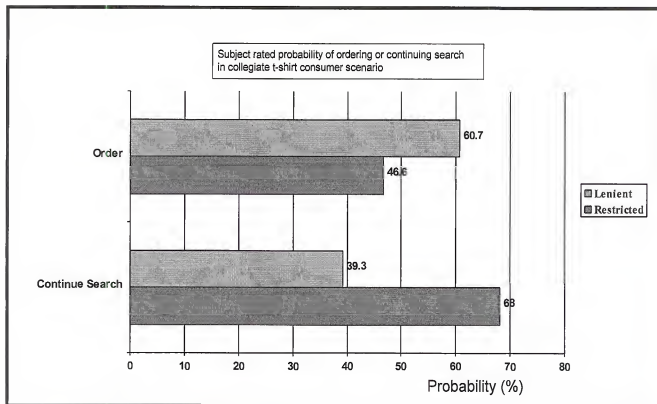


Figure 5: Pilot Study 2 Results

previous versions of lenient and restrictive policies as positive, I generically described the return policy as good or bad in Pilot Study 2.

Pilot Study 3: Decision Conflict and Quality Evaluations

The conjoint analysis provides some evidence that return policies may influence consumers beyond any explicit benefits. The scenarios in Pilot Study 2 suggest that consumers are more likely to order products and discontinue product search when remote sellers have lenient return policies. To explore the influence of return policy on decision conflict and quality evaluations, an experiment was designed in which subjects were asked to evaluate a new catalog at the concept testing stage and were given an opportunity to order a product (H1e and H1f).

Method

Subjects were 28 undergraduates from a large Southeast university who received class credit for participation. Subjects participated in groups ranging in size from two to five. The experiment consisted of two sessions, each an hour long and separated by two days. The experimenter was blind to the experimental condition. On Day 1, the cover story informed subjects that the research purpose was to concept test a new catalog of southwestern products. Subjects were given and asked to study a folder that contained a mock-up catalog page, a page of product descriptions, and a page of catalog policies. Only one variable, return policy, was manipulated. In the lenient return policy condition, the page of catalog policies contained the information that sale items could be returned for a full refund. In the restricted return policy condition, it was stated that sale items could not be returned. The subjects were then given a packet of questionnaires that was divided into sections. Each section was sealed with a sticker. For each section, subjects were instructed to break the seal and complete only that section. Sections that were not

of research interest and were only included to support the cover story contained questionnaires on catalog use and general tastes.

The catalog page featured photographs of six products (Appendix C). Two products were taken from existing catalogs. Four other products comprised the consideration set of interest. The products (a buffalo candle, an Indian basket, a jack-knife, and a barbeque lighter) were chosen because they were different from each other, yet followed a southwestern theme. These products were purchased at an obscure local store and then photographed. The photographs were used to create the display. The products were labeled as sale items, and subjects were later offered the opportunity to order one of these products as a show of appreciation from the catalog vendor. Attributes of the products were described, but no prices were listed. As part of the catalog evaluation, subjects assessed the quality of each product. This corresponds to the "Before-Order" measure of quality. At the end of this session, subjects were instructed to open the final section of their questionnaire packet. At this point, a hand-held stop-watch was started by the experimenter. The instructions stated that subjects could choose one of the sale items or a monetary gift certificate to a local store as an acknowledgment of their participation. They were asked to mark their choice on a given form. Subjects were reminded in the instructions that all catalog policies would apply. The instructions specified that if a product were chosen, the experimenter would process the order and the product would be available to them at the second session. Gift certificates, if chosen, would also be given at the second session. The time from the moment the subject opened the section until he or she marked down a choice was recorded. This measure is labeled as the 'decision-to-order' time. Subjects were then asked to rate the quality of the

product they had just chosen.³ This measure assessed the “After-Order” perceptions of quality.

On Day 2, the subjects returned to the lab and were given a packet of several filler questionnaires. Afterward, subjects were asked to open the next section of their packet. As the subjects opened the seal, they were handed the product that they had ordered. The instructions stated that, as this was a marketing research situation, if subjects were not satisfied with their product they could return it for a gift certificate regardless of return policy. The subjects then were asked to consider their product and mark their keep-return decision on the given form. Using a hand-held stop-watch, the experimenter recorded the time from the moment subjects broke the seal until they indicated their keep-or-return decision. This measure is the ‘Decision-to-Keep-or-Return’ time. Finally, subjects were asked to rate the quality of the product they had received. This is the After-Receipt measure of quality.

Results and Discussion

The analysis was collapsed across the four products offered to the subjects. Results suggest that return policy leniency did affect the amount of time subjects spent deliberating both the decision to order a product and the decision to keep or return a product. As can be seen in Figure 6, the time spent deliberating the decision to order was significantly greater for the Restricted Return condition ($m = 2.31$ minutes) than for the Lenient Return condition ($m = 1.79$ minutes; $F(1,22) = 7.24$, $p < .02$). The same is not true for the decision to keep or return where deliberation time for the Restricted return

³ All but two subjects (one from each condition) chose a product over the gift certificate. Earlier Pilot Studys were used to calibrate the dollar amount of the gift certificate so that

policy ($m = 1.84$ minutes) was similar to the Lenient Return policy ($m = 1.85$ minutes; $F(1,22) = 0.07$). The policy by time interaction was marginally significant, $F(1,11) = 3.58$, $p < .09$. H1f is supported and corresponds to the expected pattern of decision deliberation predicted by the creeping commitment hypothesis (Figure 1B).

Return policy has an effect on quality ratings (Figure 6). Although there was no significant interaction of return policy by time, there were simple effects of return policy at each of the three rating times. Mean product evaluations before ordering were higher for the lenient return policy condition ($m = 14.1$) than for the strict return policy ($m = 12.5$; $F(1,22) = 24.8$, $p < .001$). This is consistent with the hypothesis that return policy acts as a signal of quality. The quality measures taken directly after the subject ordered the product show a significant difference; the lenient policy condition mean is 16.0 and the restrictive policy mean is 14.5 ($F(1,22) = 43.5$, $p < .001$). The increase in ratings after ordering may suggest that commitment occurs immediately, not incrementally as implied by the term “creeping.” Quality ratings after physical examination show a significant difference between the lenient policy condition ($m = 12.4$) and the strict policy condition ($m = 10.3$; $F(1,22) = 6.9$, $p < .025$). H1e is supported. The persistence of a significant difference between conditions supports the contention that subjects may be evaluating products in a confirmatory manner.

it was tempting but rarely chosen.

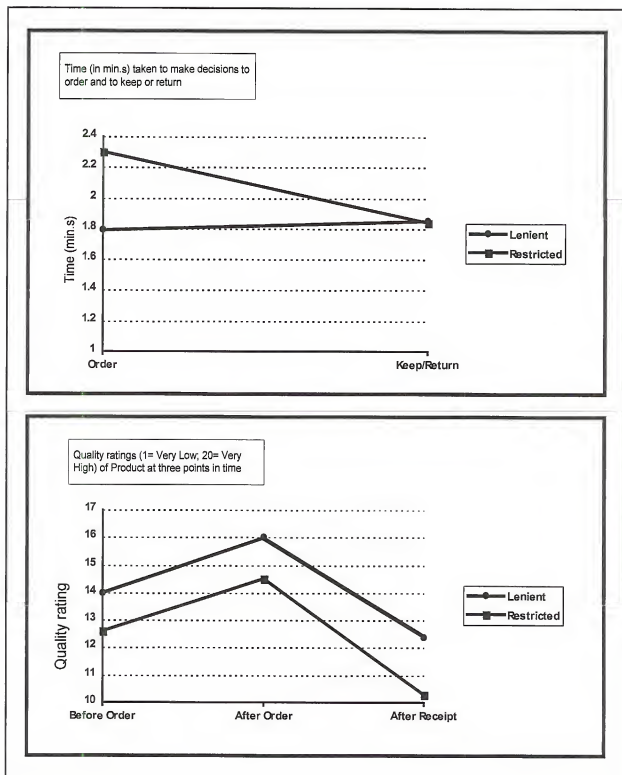


Figure 6: Pilot Study 3 Results

Summary of Pilot Study Results

These studies demonstrate that return policies can have a significant effect on remote purchases. The conjoint choice task indicates the influence of return policy on choice probabilities even when return policy is not relevant to the decision at hand. Pilot Study 2 illustrates that the leniency of the return policy can also affect consumers' perceived probability of ordering. Furthermore, with lenient return policies, consumers judge themselves *less* likely to continue product search after placing an order. These two findings suggest that lenient return policies may trigger a greater number of orders *and* more committed orders. Finally, the results of the third experiment show that lenient return policies reduce the conflict in the decision to order, but do *not* subsequently increase the amount of conflict in the decision to keep or return. Additionally, Pilot Study 3 illustrates that lenient return policies can increase product quality evaluations both before and after physical examination. At this point, I will turn to an analysis of why the effects demonstrated in these studies occur. To this end, a more elaborate experimental design was implemented in the main study.

CHAPTER 4

MAIN EXPERIMENT AND RESULTS

The objective of the main experiment is to explore quality signaling and creeping commitment in remote purchases. Three issues in quality signaling bear further investigation: (1) the moderating role of delay, (2) the moderating role of product ambiguity, and (3) the comparison of quality signaling in catalogs versus brick-and-mortar stores. Additionally, the effects of delay on commitment are studied. “Creeping” commitment may be a misnomer if consumers’ commitment increases immediately after the decision to order. However, if the delay between order and receipt has a significant influence on decision deliberation time, then the term ‘creeping commitment’ may be apt.

Moderating Factors of Quality Signaling

Delay

The delay between order and receipt of catalog purchases may affect quality evaluations through attitude polarization. Thinking about an issue has been shown to make attitudes more extreme (Tesser 1976). This research suggests such “polarization” occurs when there is a complex schema regarding correlations among attributes. However, Linville (1982) argued that polarization occurs when schemas are not complex. Millar and Tesser (1986) reconciled the conflicting studies by showing that high commitment to the original judgment and high intercorrelations within the schema lead to results similar to Tesser’s (1976), while low commitment and intercorrelation lead to

Linville's results. In a catalog purchase situation, consumers may have rules about attributes that predict quality, such as price or return policy. By ordering, consumers demonstrate their commitment to their judgment of expected quality. Also, time allows the opportunity for repeated expression of attitudes, and attitude repetition has been shown to lead to polarization (Downing, Judd, and Brauer 1992). Accordingly, delay may create the opportunity for catalog consumers' attitudes about expected quality to polarize. Doubts created by a restricted return policy may grow stronger. Positive expectations created by a lenient policy may become even more positive. The main experiment varies the length of the delay between order and receipt; the two decision points were separated by one week in the Delay condition and by a few minutes in the Immediate condition.

H2a: With a delay between order and receipt, quality ratings will decrease over time in the restricted return policy condition and increase over time in the lenient return policy conditions.

Ambiguity of Product Attributes

Research has found that the tendency for consumers to act in a confirmatory manner is moderated by the ambiguity of the product attributes (Deighton 1984; Klayman and Ha 1987). Hoch and Ha (1986) define ambiguity as the potential for multiple interpretations of overall product quality. Many experience attributes have this characteristic. For example, thin fabric may be positively interpreted as 'lightweight' or negatively interpreted as 'flimsy.' Products differ in the degree of ambiguity of their salient attributes. If product attributes are ambiguous, consumers will have a more difficult time assessing quality. In this situation, the consumer may be open to confirmation bias; he or she may judge the quality of the product in a manner that

confirms his or her earlier expectation of quality. The main experiment varies ambiguity of product experience at the time of receipt.

H2b: When unambiguous product experience is available after receipt, product evaluations will not be affected by return policy. However, when experience is ambiguous, evaluations will be affected by return policy.

Catalogs versus Brick-and-Mortar Stores

I theorize that return policy acts as a signal of quality in remote purchases because consumers have impoverished information when making the initial purchase decision. In traditional brick-and-mortar stores, consumers have access to touch and feel information that often facilitates the judgment of quality. There may be product attributes (especially credence attributes) for which direct experience does not reduce ambiguity. However, the product category selected for this experiment (candy bars) does not have such attributes. Thus, return policy should not influence quality ratings in brick-and-mortar store purchases. The main experiment includes both catalog and brick-and-mortar conditions. In the Brick-and-Mortar conditions, subjects receive full, unambiguous product experience prior to the decision to order. In the Catalog-Nonambiguous condition, subjects receive full, unambiguous product experience at receipt.

H2c: Return policy will not affect product quality ratings in brick-and-mortar conditions.

H2d: Conversely, return policy will affect product quality ratings for catalog conditions.

Commitment

As previously discussed, commitment refers to the increase in purchase confidence, from a trial mentality to a buying mentality, observed in consumers who order under lenient return policies. If the consumer's commitment to a catalog purchase

increases after the order, is the increase immediate or gradual? The time between ordering and receipt is manipulated in the main experiment. Subjects receive the products after a few minutes (Immediate condition) or after one week (Delay condition). If commitment increases incrementally, the deliberation time for the keep-return decision should be less in the Delay condition than in the Immediate condition. The increase in quality ratings observed directly after order in Pilot Study 3 suggests that the effect is immediate; however, it is not clear if delay will also affect the deliberation time at the decision to order.

H2e: If commitment increases over time in lenient return policy conditions, decision deliberation times will be influenced by return policy in the Delay condition, but not in the Immediate condition.

Selection and Construction of Experimental Stimuli

The cover story used in the main experiment is similar to the one used in Pilot Study 3. The experimental protocol requires subjects to order a catalog product. It was necessary to select a product category with two particular characteristics: unknown brand name and easily manipulated experience ambiguity. To this end, four Canadian candy bars were chosen: Caramilk, Dairy Milk, Smarties, and Coffee Crisp. Cadbury and Nestle produce these candy bars. However, as subjects might be familiar with these parent brands, the names were removed from labels reproduced in the stimuli. Product experience ambiguity was manipulated by the opportunity to taste. Subjects in the Nonambiguous conditions tasted a small sample of candy at receipt; subjects in the Ambiguous conditions did not.

Labels from the four selected candy bars were scanned and used to create a mock catalog page (Appendix E). Text was added that detailed nutritional information and

price. Another page describing catalog policies was created (Appendix F). Return policy leniency was manipulated via two versions of the policies page: one specified that the vendor would pay for return postage (Lenient condition) and the other specified that the consumer would be charged \$0.25 per returned item to cover postage costs (Restricted condition).

To control measurements of response time, a computer program was developed and used in lieu of written questionnaires. Questionnaires from the program can be seen in Appendix D.

Method

Subjects

Subjects were undergraduates from a large Southeastern university. They received class credit for participation. Subjects participated in groups ranging in size from two to five. Data were collected from 108 subjects. Eighty-five subjects ordered products. Eleven subjects were eliminated due to computer program problems. Four subjects who failed to attend the second session were eliminated. There was no evidence of differential mortality among conditions.

Design

A 2 (Lenient versus Restricted Return Policy) X 2 (Immediate versus Delay) X 3 (Bricks-and-Mortar versus Catalog-Ambiguous versus Catalog-Nonambiguous) between-subjects factorial design was used. This design is reproduced in Figure 7. Product quality evaluations (Evaluation) at the initial order decision and the retention decision were treated as repeated measures. Deliberation time (Time) for both decisions also was measured.

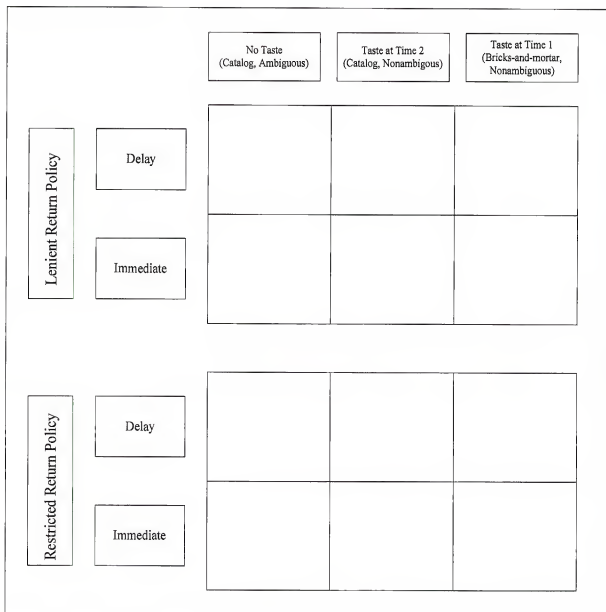


Figure 7: Experimental Design

Procedure

The procedure of the main experiment closely followed that of Pilot Study 3; therefore, only additions to the protocol will be discussed here. A visual depiction of the procedure is presented in Figure 7a. Subjects were situated at computer carrels and given folders containing a catalog policies page and a product display page. The computer

program issued all study instructions and presented the cover story. Subjects were informed that they would be providing consumer information and opinions to a large international candy manufacturer that was considering the use of catalogs to introduce their products in the United States. After responding to several filler questionnaires and evaluating the products and policies featured in the folder, subjects in the Bricks-and-Mortar conditions were given the opportunity to taste the four featured candies. Next, subjects chose either one of the candies or a gift certificate as a token of appreciation for their participation in the study. Subjects in the two catalog conditions did not taste the candies, but went straight to the product choice task. After the choice task, subjects in the Delay conditions were reminded to attend the second session and dismissed. Subjects in the Immediate conditions responded to another questionnaire that tested their memory for product and policy information shown in the mock catalog pages. After the memory task, these subjects were given their chosen product (or gift certificate) and asked to make the keep or return decision. At this time, subjects in the Catalog Nonambiguous condition were also given a sample of the candy to taste. Subjects in the Catalog Ambiguous condition never tasted the candy. Finally, subjects evaluated the product they had received and were dismissed. Subjects in the Delay condition reconvened one week later and, resuming with the memory questionnaire, followed the same procedure described above for the Immediate conditions. The experimental procedure is presented in Figure 7a.

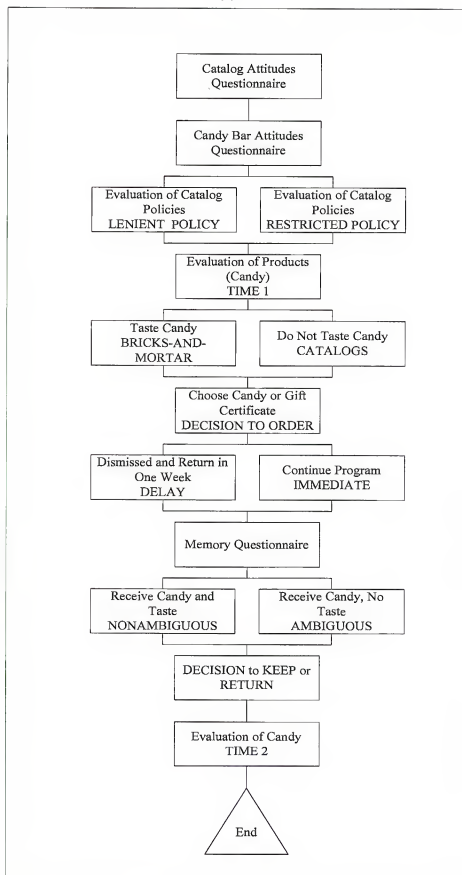


Figure 7a: Experimental Procedure

Results

Product Quality Evaluation

There was a marginally significant interaction of Delay x Return Policy x Evaluation ($F(1,73) = 3.34, p = .07$). As previously noted, Delay and Return Policy were between-subjects factors, while Evaluation was a within-subject factor. The two-way interaction of Return Policy x Evaluation is significant in the Delay condition ($F(1,41) = 7.32, p = .01$), but not in the Immediate condition ($F(1,32) = 0.0, p = .95$). This interaction is reproduced in Figure 8. With a one-week delay between order and receipt, evaluations of the lenient policy products became more positive and restricted policy products became more negative. H2a is supported.

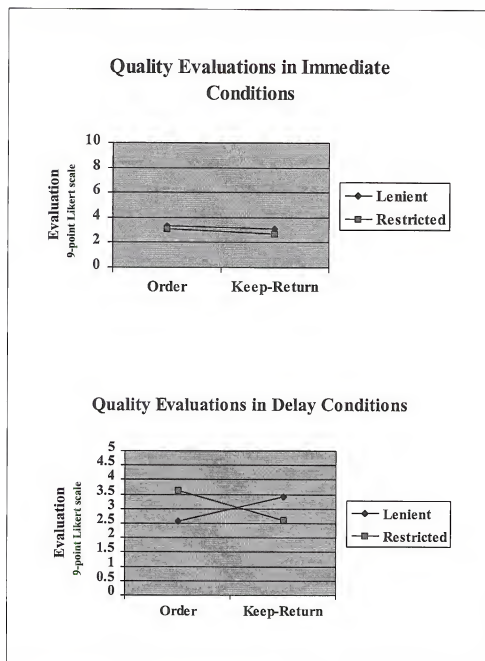


Figure 8: Product Evaluation Results by Delay

Quality evaluation data also suggest that catalogs differ from bricks-and-mortar stores due to the timing of product experience. As suggested in Figure 9, there was a marginally significant three-way interaction of Return Policy x Bricks-and-Mortar versus Catalog x Evaluation ($F(1,42) = 3.73$, $p = .06$). For the Catalog-Nonambiguous

conditions (taste candy after receipt), the two-way interaction of Return Policy x Evaluation is significant ($F(1,23) = 13.64, p = .02$). Time 1 evaluations were not influenced by return policy ($F(1,27) = 1.92, p = .18$). Time 2 evaluations were affected by return policy ($F(1,27) = 5.22, p = .03$). H2d is supported. For Bricks-and-Mortar conditions (taste candy prior to order), there is no Return Policy x Evaluation interaction ($F(1,17) = 0.14, p = .72$). Thus, lenient return policies do not have the same benefits for bricks-and-mortar stores that exist for catalogs. H2c is supported.

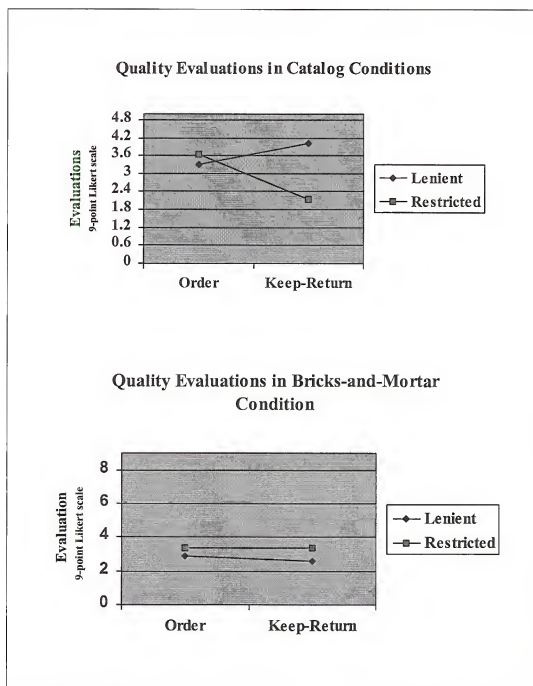


Figure 9: Product Evaluation Results by Venue

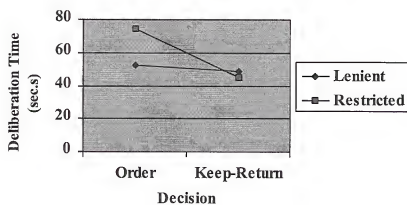
Finally, the quality evaluations of the two catalog conditions were compared to determine the effects of ambiguity on quality signaling. These results suggest that ambiguity does not have a significant influence on quality evaluations at receipt. The

pattern of quality ratings for lenient versus restricted return policies did not significantly differ between Ambiguous and Nonambiguous catalog conditions. Thus, H2b is not supported.

Decision Deliberation Time

To determine if the increase in commitment observed in lenient-policy catalog purchases is immediate or incremental, the deliberation times for both the decision to order and the decision to keep or return were compared across the Delay and Immediate conditions (see Figure 10). There was a significant three-way interaction of Delay x Return Policy x Deliberation Time ($F(1,73) = 5.51, p = .02$). Deliberation time was analyzed as a repeated measure within-subject factor. In the Delay condition, there was a significant Return Policy x Deliberation Time interaction ($F(1,41) = 5.54, p = .02$). In the Immediate condition, the two way interaction was not significant ($F(1,32) = 1.36, p = .25$). This pattern of data suggests that return policy only affects deliberation time when there is a delay between order and receipt. When subjects expect an immediate keep-return decision, they do not put off the decision-making effort at Time 1. Thus, H2e is supported. Commitment appears to creep.

Decision Deliberation Time in Delay Conditions



Decision Deliberation Time in Immediate Conditions

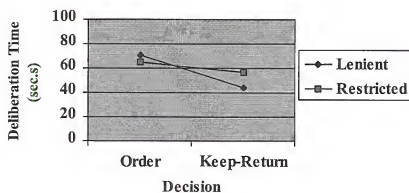


Figure 10: Decision Deliberation Time Results

Discussion

Taken together, the results of this study suggest that lenient return policies benefit catalog vendors but not necessarily bricks-and-mortar vendors. Lenient return policies reduce deliberation time for the decision to order but only if there is a delay between order and receipt. If product receipt is immediate, catalog consumers make equally deliberate order decisions regardless of return policy leniency. Also, the increase in commitment observed for consumers who order under lenient return policies only occurs when there is a delay between order and receipt. This supports the idea of 'creeping' commitment.

Additionally, product quality evaluations increased with lenient return policies only in catalog conditions. When subjects had nonambiguous product experience prior to ordering, lenience did not increase perceptions of product quality. The delay between order and receipt also affected product quality evaluations. In lenient return policy conditions, evaluations improved with time. In restricted return policy conditions, evaluations deteriorated with time. It appears that lenient return policies have both quality evaluation and decision conflict benefits for catalog vendors.

It is interesting that subjects with ambiguous information (i.e., those who did not taste the candy) did not differ from subjects with nonambiguous information (i.e., those who did taste the candy) in quality evaluations. This result is contrary to the explanation that subjects evaluate products in a confirmatory manner at receipt. One possible explanation for the contradictory results is that subjects did not find taste to be unambiguous. Hoyer and Brown (1990) found that when subjects had strong quality expectations created by brand awareness, their evaluations of products were not

influenced by taste samples. Perhaps, taste did not influence after-receipt evaluations in this study because return policy effects had created strong expectations of quality.

CHAPTER 5 GENERAL DISCUSSION

The studies in this dissertation found consistent effects of return policy on remote purchase behavior. Greater lenience in return policy resulted in increased probability of order. Choice probabilities of remote purchases were affected by return policy, even when the described feature of the return policy did not apply to the choice at hand. Lenient return policies decreased the probability of continued product search. Lenient return policies reduced deliberation time for the decision to order but did not result in a subsequent increase in deliberation for the decision to keep or return; thus, lenience appears to decrease the overall amount of purchase decision conflict. Greater lenience in return policies also resulted in more positive ratings of product quality, both prior to choice and after receipt. Ambiguity of product experience did not affect quality perceptions after receipt. However, delay affected both deliberation time and product quality perceptions. Subjects spent less time over the decision to order in lenient conditions only when there was a delay between order and receipt. With a delay, subjects' attitudes about product quality became more positive in lenient conditions and more negative in restricted conditions. Finally, the data suggest that these results are unique to remote purchases; no such effects were observed in the simulated bricks-and-mortar conditions.

The theoretical and managerial implications of these results are discussed below followed by the limitations of the studies. Finally, opportunities for future research are considered.

Theoretical Implications

The results of these studies compare favorably with recent research. The increase in purchase commitment prior to product receipt observed in these studies is similar to the findings of Sen and Johnson (1997). Their research demonstrates that consumers can exhibit possession effects (i.e., an increase in product evaluation due to possession) before actual ownership or consumption. Taken together, these results suggest that product ownership depends more on cognitive perception than physical possession.

The findings of this work also coincide with research by Lynch and Ariely (1998) that investigates the implications of search cost reduction in Interactive Home Shopping (IHS). Practitioners of this remote purchase venue fear that electronic commerce will increase price sensitivity and competition due to greater ease in price search and comparison. Lynch and Ariely (1998) found that reduced search costs did not influence price sensitivity when stores were easily compared and quality of information was high. As in this research, the results suggest that some retailer fears about emerging forms of remote purchase may be unwarranted.

Managerial Implications

The overall effect of a lenient return policy appears to be beneficial to remote vendors. These benefits may be contrary to managerial intuition and practice. First, greater lenience appears to increase order rates by reducing the amount of conflict in the

decision to order and creating higher quality expectations. However, managers may fear that these effects may have consequences that could lead to higher return rates after the product is received. Specifically, decision conflict may increase at the time of the decision to keep-or-return, and inflated expectations may lead to lower quality perceptions after examination. My results suggest that this is fear is unwarranted. Keep-return decision conflict did not increase in lenient conditions and was not significantly greater than in restricted conditions. Quality perceptions were higher in lenient conditions than in restricted conditions even after physical examination. Even with the increased flexibility that lenient return policies allow, subjects showed greater commitment to their order by being less likely to continue product search for competing alternatives. Results suggest that consumers who frame their initial order as trials become more committed to their purchase during the interval prior to receipt. I term this phenomenon "creeping commitment." In principle, with increased commitment to the purchase and higher perceived quality after receipt, consumers who order products with lenient return policies should be less likely to return goods than those who order under more restricted policies.

These results appear to be unique to remote purchases. The benefits demonstrated in lenient policy conditions did not hold for bricks-and-mortar stores. It appears that these differences are not due to the separation of the purchase decision into the decision to order and the decision to keep-or-return, but rather are due to the delay between these two decisions. The differences in deliberation times between lenient and restricted return policy conditions only occurred when a one-week delay separated order and receipt. Similarly, with delay, quality ratings became more extreme in the direction of the

expectations signaled by return policy. Also, with nonambiguous product experience at the time of order, subjects did not rely on return policy as a signal of product quality.

Limitations

The major limitation of this dissertation is that these choices did not have the same importance or involvement for subjects as choices made “in the real world.” Also, both Pilot Study 3 and the main experiment were calibrated so that the gift certificate dollar value was enough to be considered, but not so much that it was chosen often. This was done because informative data came only from subjects who ordered products. Thus, it was not possible to gather conclusive evidence regarding order and return rates.

The lack of a significant effect of ambiguity on quality ratings at the time of receipt is not conclusive evidence that confirmation bias does not influence evaluations. It is possible that the taste manipulation did not sufficiently affect perceived product ambiguity after receipt. The differences between catalog and bricks-and-mortar conditions suggest that taste did manipulate ambiguity at the decision to order. However, it is possible that, by the time of receipt, attitudes about expected quality had strengthened to such an extent that taste did not affect quality ratings. Thus, the results do not rule out the confirmation bias explanation of post-receipt quality evaluation effects.

Future Research

The most obvious avenue of future research is the collection of “real world” catalog or Internet purchase data. These retail channels typically provide sophisticated databases that are capable of testing the hypotheses presented in this dissertation. Such

studies could provide externally valid evidence for the effect of return policy on order and return rates. Another direction for research is to examine the differences between consumer behavior in various forms of remote purchase, such as catalogs, the Internet, TV shopping channels, and interactive marketing. The evolution of future marketing channels may depend on their similarity to a distinct venue of remote purchase. Finally, future research should focus on the effects of delay on other remote purchase behaviors. In these studies, delay emerged as the most influential factor in return policy effects. It would be interesting to look at the delivery times frequently used by remote vendors, such as overnight mail, 10 business day delivery, and 4-6 week delivery. If increased commitment depends on delay, some remote vendors might be hurt by their attempts to deliver products expeditiously.

APPENDIX A
CONJOINT ANALYSIS STIMULUS

Consumer Task #1

Below are the mid-range radar detectors offered in eight different catalogs. Please rank all radar detectors by which you would choose-- from 1 (choose first) to 8 (choose last). Write the ranking in the star to the side of each box. None of the below options are sale items.

Option A
Price \$174.99
Variable signal option?
NO
City/Highway option?
YES
Return time limit? 30
days
Return sale items? NO



Option E
Price \$174.99
Variable signal option?
YES
City/Highway option?
YES
Return time limit? 45
days
Return sale items? YES



Option B
Price \$174.99
Variable signal option?
NO
City/Highway option? NO
Return time limit? 45
days
Return sale items? NO



Option F
Price \$174.99
Variable signal option?
YES
City/Highway option? NO
Return time limit? 30
days
Return sale items? YES



Option C
Price \$179.99
Variable signal option?
YES
City/Highway option?
YES
Return time limit? 30
days
Return sale items? NO



Option G
Price \$179.99
Variable signal option?
NO
City/Highway option?
YES
Return time limit? 45
days
Return sale items? YES



Option D
Price \$179.99
Variable signal option?
YES
City/Highway option? NO
Return time limit? 30
days
Return sale items? NO



Option H
Price \$179.99
Variable signal option?
NO
City/Highway option? NO
Return time limit? 30
days
Return sale items? YES



APPENDIX B
CONSUMER SCENARIO STIMULI

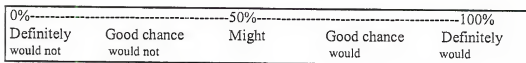
Consumer Role-Playing

Please imagine that you are the consumer depicted in the following paragraph. Imagine that you are in the position of this consumer and have the options mentioned below. Answer the two questions by writing in the boxes and using the scale shown below.

As a Gator fan, you are eagerly awaiting the first game of the season which is only two weeks away. You realize that you need a new U.F. t-shirt to wear to this game because your only Gator shirt shrunk in the dryer. You browse through some near-by stores and can only find tacky touristy Gator shirts. You despair of finding a decent t-shirt, but then a friend gives you a catalog specializing in University of Florida clothing and paraphernalia. Your friend also tells you that there is a store on the other side of town (20 minute drive) that has cool U.F. stuff. You look through the catalog and find a shirt that you like and can afford. The catalog has a delivery time of 8 days so you can get the shirt in time for the first game. Fortunately, the catalog has a very good return policy compared to other catalogs; it will refund your money and arrange and pay for shipment if you decide to return the product! You sit looking at the catalog and considering the purchase. You really *really* like the shirt's design but can't tell from the picture how good the quality of the material is. The last thing you need is to shrink another shirt in the dryer!

At this point, what is the probability that you
would order the shirt?-----

% chance



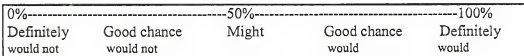
Consumer Role-Playing

Please imagine that you are the consumer depicted in the following paragraph. Imagine that you are in the position of this consumer and have the options mentioned below. Answer the two questions by writing in the boxes and using the scale shown below.

As a Gator fan, you are eagerly awaiting the first game of the season which is only two weeks away. You realize that you need a new U.F. t-shirt to wear to this game because your only Gator shirt shrunk in the dryer. You browse through some near-by stores and can only find tacky touristy Gator shirts. You despair of finding a decent t-shirt, but then a friend gives you a catalog specializing in University of Florida clothing and paraphernalia. Your friend also tells you that there is a store on the other side of town (20 minute drive) that has cool U.F. stuff. You look through the catalog and find a shirt that you like and can afford. The catalog has a delivery time of 8 days so you can get the shirt in time for the first game. Unfortunately, the catalog has a very poor return policy compared to other catalogs; it will refund your money but you are responsible for arranging and paying for shipment if you decide to return the product! You sit looking at the catalog and considering the purchase. You really *really* like the shirt's design but can't tell from the picture how good the quality of the material is. The last thing you need is to shrink another shirt in the dryer!

At this point, what is the probability that you
would order the shirt?-----

% chance



Consumer Role-Playing

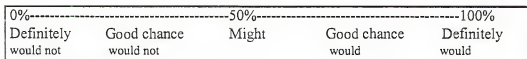
Please imagine that you are the consumer depicted in the following paragraph. Imagine that you are in the position of this consumer and have the options mentioned below. Answer the two questions by writing in the boxes and using the scale shown below.

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You decide to order the shirt. Given the above situation, would you still drive across town to keep looking for a Gator shirt before the ordered shirt arrives?

Having ordered the shirt, what is the probability that you will still go to the other store before your ordered shirt arrives?-----

% chance



Consumer Role-Playing

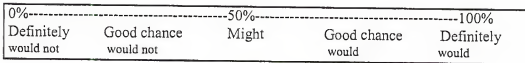
Please imagine that you are the consumer depicted in the following paragraph. Imagine that you are in the position of this consumer and have the options mentioned below. Answer the two questions by writing in the boxes and using the scale shown below.

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You decide to order the shirt. Given the above situation, would you still drive across town to keep looking for a Gator shirt before the ordered shirt arrives?

Having ordered the shirt, what is the probability that you will still go to the other store before your ordered shirt arrives?-----

% chance



APPENDIX C
PRODUCTS FROM PILOT STUDY 3

Sample Product Descriptions

1. Fiesta Basket

This hand-woven basket features a traditional starburst design in azure, jade, and crimson straw. The basket is 14 inches in diameter and stands 2 inches deep. The craftsmanship offers a lightweight yet durable quality which make it ideal for serving tortilla chips or using as a decorative piece. Baskets make great collectibles or gifts!

2. The Blue Buffalo

This funky hand-made candle is the perfect addition for cosy nights spent at home on the range. The candle stands 6 inches tall and 7 inches long. The candle is made in the "overdipped" style out of royal blue wax. The design is drawn from the elegant simplicity of Native American carvings and is also available in a range of traditional colors such as black, teal, indigo purple, and fuschia.

3. Pocket knife by Sterling

This convenient multi-purpose knife offers five functions: a standard blade, two different bottle-openers, a corkscrew, and a wedge. Manufactured by Sterling, this pocket knife is compact in design and uses extra tight fastenings for added safety and strength. Perfect for use on keychains or as an extra knife stored with camping or fishing gear.

4. Sanbei Match

The Sanbei Match is a long-nosed refillable butane gas lighter perfect for campfires, barbeques, lanterns, and fireplaces. Made out of durable plastic, it features Piezo-Electric ignition (which never requires batteries), adjustable flame controls and a safety trigger. Make fires and barbeques easy and safe!

APPENDIX D
MAIN EXPERIMENT QUESTIONNAIRES

Catalog Attitudes

The first series of items will focus on your attitudes toward catalogs in general. Please respond to each statement using the scale provided.

1. I shop by catalogs more than the average consumer.
2. I look through every catalog that I get in the mail.
3. I dislike shopping by catalog.
4. I would consider buying gifts using catalogs.
5. I get too many catalogs in the mail.
6. I often buy clothes from catalogs.
7. I often buy electronic equipment (stereo, computer, etc.) from catalogs.
8. I often buy food/beverage products from catalogs.
9. I believe that I will use catalogs more in the future.
10. Catalogs offer wider selection than traditional stores.
11. Catalogs are less reliable than traditional stores.
12. Catalog purchases are riskier than traditional store purchases.
13. Catalogs are more convenient than traditional stores.
14. Catalogs give more product information than traditional stores.
15. It's harder to find what you want in catalogs than in traditional stores.
16. It's safer to shop by catalog than in traditional stores.
17. It's less enjoyable to shop by catalog than in traditional stores.
18. It's quicker to shop by catalog than in traditional stores.
19. In the future, catalogs will be better than they are now.
20. In the future, traditional stores will be better than they are now.

Thank You

This completes our concept-testing study. Thank you very much for your participation. This study will be running for a few more weeks and your friends may be participants later on. For this reason, we ask that you do not discuss this experiment with anyone in MAR 3023 until the end of the semester. If other participants get to see or taste your candy, this will bias our study results. Thank you very much for your cooperation!

Candy Evaluation

Please evaluate the candy that you have just received by responding to the following statements.

1. I like the candy bar I ordered.
2. I am satisfied with my purchase of the candy bar.
3. The candy bar is a high quality product.

Candy Receipt (Conditions 2,5,8, & 11)

You will now be given the candy that you ordered. Please examine it closely and make your decision to either keep or return it. Do not open the package. Opened packages can not be returned. If you did not choose to order candy, please indicate that below.

Provided for you is a sample of the candy that you ordered. You may taste this now.

Please enter your choice when you have made a decision.

4. I will keep the candy that I ordered.
5. I will return the candy I ordered in exchange for the gift certificate (\$2 minus the return shipping and handling charge).
6. I did not order candy.

Candy Receipt (Conditions 1,3,4,6,7,9,10, & 12)

You will now be given the candy that you ordered. Please examine it closely and make your decision to either keep or return it. Do not open the package. Opened packages can not be returned. If you did not choose to order candy, please indicate that below.

Please enter your choice when you have made a decision.

1. I will keep the candy that I ordered.
2. I will return the candy I ordered in exchange for the gift certificate.
3. I did not order candy.

Memory Questions

This section of questions tests your memory for information contained in the catalog policies page and the mock catalog page. You can not refer back to the binder in answering the questions. All items will be in True-or-False form.

1. Smarties consisted of a chocolate and caramel bar.
2. Coffee Crisp had the lowest calorie count.
3. A quality assurance was given by the catalog.
4. Dairy Milk contained almonds.
5. A \$1 charge is deducted from any order that is returned to cover shipping costs.
6. A customer service hotline is provided by the catalog.
7. Caramilk had the lowest net weight.
8. Orders can be placed over the Internet.
9. The company that puts out the catalog produces all the candy bars.
10. The shipping and handling charge is included in the price of the candy.

Choice of Candy

As a participant in the concept-testing of this catalog, we would like for you to try out the catalog. We will give you \$2 to spend on candy from the catalog which you will later receive and will be yours to keep. If you do not wish to choose any of the candy bars shown on the mock catalog page, you may choose a \$2 gift certificate redeemable for the candy of your choice at any local supermarket. The candy or gift certificate is our thanks to you for your participation in this study.

Please consider the four choices of candy shown in the mock catalog page. You may choose \$2 worth of any one of these items. If none of the choices appeal to you, you may choose the gift certificate. The experimenter will handle your order and give it to you. All catalog policies, which you have read about, will be followed. You may look at the policies again to refresh your memory.

When you have decided, enter in your choice:

1. Caramilk
2. Coffee Crisp
3. Dairy Milk
4. Smarties
5. Gift Certificate

Candy Tasting (Conditions 3,6,9 & 12)

You will now be given a chance to taste and evaluate the four candy bars shown in the mock catalog page. Please follow the order shown here.

Caramilk

Taste the sample labeled Caramilk now.
Please respond to the following statements.

1. I like Caramilk.
2. I would be satisfied if I bought Caramilk.
3. Caramilk is a high quality product.

Coffee Crisp

Taste the sample labeled Coffee Crisp now.
Please respond to the following statements.

1. I like Coffee Crisp.
2. I would be satisfied if I bought Coffee Crisp.
3. Coffee Crisp is a high quality product.

Dairy Milk

Taste the sample labeled Dairy Milk now.
Please respond to the following statements.

1. I like Dairy Milk.
2. I would be satisfied if I bought Dairy Milk.
3. Dairy Milk is a high quality product.

Smarties

Taste the sample labeled Smarties now.
Please respond to the following statements.

1. I like Smarties.
2. I would be satisfied if I bought Smarties.
3. Smarties is a high quality product.

Mock Catalog Page Evaluation

Now, please take the opportunity to look at the mock catalog page located in the binder at your workstation. Continue to look at this page as you respond to the following statements.

1. Nutritional information is presented clearly.
2. Product descriptions are well-written and evocative.
3. More products should be shown on a page.
4. Fewer products should be shown on a page.
5. Pictures other than that of the candy bar should be used.
6. The prices for the candy bars are too high.
7. The prices for the candy bars are too low.
8. Discounts for buying in bulk should be offered.
9. Products and their descriptions are clearly linked.
10. I expect that the quality of the Caramilk is high.
11. I expect that the quality of the Smarties is high.
12. I expect that the quality of the Coffee Crisp is high.
13. I expect that the quality of the Dairy Milk is high.
14. I expect high quality products from this catalog.
15. I expect that I would like the products from this catalog.

Catalog Policies Evaluation

Please read the description of the proposed catalog policies provided in the binder at your workstation. When you have read over each item carefully, please move on and respond to the following statements using the given scale. You will be asked to evaluate the policies that you have just read about.

Catalog Policies Evaluation

1. The policies were easy to understand.
2. The policies were easy to read.
3. The quality assurance seemed better than most catalogs I have seen.
4. The policy about shipping and handling costs seemed better than most catalogs I have seen.
5. The method of ordering products seemed better than most catalogs I have seen.
6. The policy about product questions seemed better than most catalogs I have seen.
7. The policy about product returns seemed better than most catalogs I have seen.
8. A shipping and handling charge other than a flat rate should be used.
9. A "1-800" phone number is the easiest way to order products.
10. It is important to be able to talk to knowledgeable sales assistants when ordering.
11. It is important to have a customer service number for product questions.
12. The catalog should pay for shipping costs to send products back.

Candy Preferences

The following items will ask you about your current preferences for different types of candy. Please respond to each statement using the scale provided.

1. My favorite type of candy is chocolate.
2. I eat more candy than my friends.
3. I prefer milk chocolate to dark chocolate.
4. I prefer candy bars with nuts.
5. I prefer candy bars with caramel.
6. I prefer candy bars with crispy wafers.
7. I prefer candy bars with coconut.
8. I prefer candy bars with fruit or raisins.
9. I prefer candy bars with crème fillings.
10. Candy bought in the grocery store is typically as good as candy bought in specialty stores.
11. Price is a good indicator of the quality of candy.
12. I buy the same candy bars over and over.
13. I consider a candy bar to be a treat.
14. I often try new candy bars.
15. Eating a candy bar puts me in a good mood.
16. I like Snickers.
17. I like M&M's.
18. I like Mounds.
19. I like Milky Way.
20. I like Kit Kat.
21. I like Butterfingers.
22. I like Hershey's Bar.
23. I like Mars Bar.
24. I like Reese's Peanut Butter Cup.
25. I like 3 Musketeers.

APPENDIX E
PRODUCTS FROM MAIN EXPERIMENT

All bars on this page...



Pockets of smooth milk chocolate filled with rich caramel

Ingredients: Sugar, Milk Ingredients, Modified Palm, Modified Vegetable Oils, Glucose, Chocolate, Golden Syrup, Cocoa Butter, Soya Lecithin, Natural and Artificial Flavor.

Net weight: 52 g Fat: 11 g
Calories: 270 Protein: 3.6 g
Carbohydrate: 32 g

Mocha filling between crisp wafers covered in light milk chocolate.

Ingredients: Sugar, Milk Chocolate, Cocoa Butter, Flour, Skim Milk Powder, Natural Mocha Flavoring
Net weight: 50 g Fat: 13 g
Calories: 260 Protein: 3g



Coffee Crisp

Dairy Milk



A solid bar of the thickest richest milk chocolate in the best European fashion.

Ingredients: Sugar, Milk, Cocoa Butter, Chocolate, Soya Lecithin, Peanut Oil, Natural Flavors.
Net Weight: 50 g Fat: 15 g
Calories: 265 Protein: 5 g
Carbohydrate: 30 g

Crunchy candy shells with milk chocolate centers.

Ingredients: Milk Chocolate, Sugar, Flour, Modified Starch, Hydrogenated Vegetable Oil, Dextrin, Color.
Net Weight: 56 g Fat: 10 g
Calories: 264 Protein: 3 g
Carbohydrate: 41 g



Smarties

\$1.00 each or 3 for \$2.00

APPENDIX F
CATALOG POLICIES FROM MAIN EXPERIMENT

Catalog Policies

Quality Assurance

We will always strive to offer you the best quality products at reasonable prices. If you are not satisfied with the quality of a product that you order from us, you can always send it back for a full refund or exchange.

Shipping and Handling Costs

Due to mail service bidding, our company has secured a flat rate shipping cost that is included in the price of the product you order. Thus, you will not be charged an extra shipping cost when you order our products. Shipping generally takes 3-5 business days, however Fed-Ex service is available upon request.

How to Order Products

Products can easily be ordered by calling 1-800-XXX-XXXX or via our website at <http://www.xxxxxxx.xxx>. We employ many friendly and professional operators and sales assistants so that you will always receive the quickest and best service.

Product Questions and Returns

If you have any questions about a product that you have received, you can call our service number, 1-800-XXX-XXXX. Should you decide to return a product, you need only to call the service number and the operator will arrange to have the product picked up and shipped back. The catalog will pay for return shipping.

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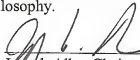
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BIOGRAPHICAL SKETCH

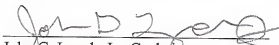
Stacy Lynn Wood was born on June 23, 1973 in York, Pennsylvania. As the daughter of an industrious, analytic civil engineer and a perceptive, passionate bibliophile, she spent the majority of her youth trying to please her right brain, her left brain, and her parents. She completed high school in Jacksonville, Florida, and was awarded a National Merit Scholarship to attend the University of Florida. In the interests of practicality and job demand, she earned a Bachelor of Science degree in Finance. However, in her senior year, Stacy was lured into academia with the dream of a job that required both statistical analysis and creative thought. She joined the marketing department of the University of Florida as a doctoral student in August 1994 and has greatly enjoyed her studies, her work, and her colleagues. She will join the faculty at the University of South Carolina in August 1998. Her research interests are in the areas of consumer decision making and new product innovation. She looks forward to developing outside interests, perhaps in gardening and tennis.

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.



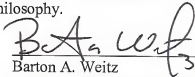
Joseph Alba, Chairman
Professor of Marketing

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.



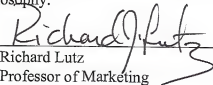
John G. Lynch, Jr., Cochairman
Graduate Research Professor of
Marketing

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.



Barton A. Weitz
J.C. Penney Eminent Scholar of
Marketing

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.



Richard Lutz
Professor of Marketing

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

A handwritten signature in dark ink, appearing to read "Lynn Wooten", is written over a horizontal line.

Lynn Wooten

Assistant Professor of Management

This dissertation was submitted to the Graduate Faculty of the Department of Marketing in the College of Business Administration and to the Graduate School and was accepted as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

May 1998

Dean, Graduate School